

**GOVERNMENT OF INDIA
POWER
LOK SABHA**

STARRED QUESTION NO:87

ANSWERED ON:07.12.2004

PER CAPITA DEMAND AND SUPPLY OF POWER

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Will the Minister of POWER be pleased to state:

- (a) the per capita gap between the consumption and generation of power from various sources in the country recorded during each of the last three years, State- wise;
- (b) total quantum of power supplied from Central pool to each State during the period;
- (c) whether the gap between consumption and generation is likely to be bridged during the ensuing five years;
- (d) if so, the details thereof;
- (e) the annual percentage of increase being registered in power generation;
- (f) whether it is a fact that the allocation of funds for the current financial year has been curtailed; and
- (g) if so, the details thereof along with the reasons therefor?

Answer

THE MINISTER OF POWER(SHRI P.M. SAYEED)

(a) to (g) : A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (g) OF STARRED QUESTION NO. 87 TO BE ANSWERED IN THE LOK SABHA ON 07.12.2004 REGARDING PER CAPITA DEMAND AND SUPPLY OF POWER.

(a):

(i) As per the old methodology of computation of per capita consumption of electricity, out of the total electricity generated, transmission and distribution losses, auxiliary consumption, etc. are excluded before dividing by the mid year population. Based on this definition, the gap between per capita consumption and per capita generation State-wise for the last three years i.e. 2001-02, 2002-03 and 2003-04 is given at Annexure I(A), I(B) and I(C) respectively.

(ii) As per the United Nations methodology adopted in India since 2001-02, whatever electricity is generated at the terminals is taken into account for arriving at per capita consumption of electricity. Thus, whatever electricity is generated is taken as energy consumed. Therefore, there is no gap between per capita consumption and the per capita generation as per this definition. Per capita consumption/generation, State-wise as per new definition for the last three years i.e. 2001-02, 2002-03 and 2003-04 is at Annexure-II.

(iii) However, considering the title of the question, the State wise figures showing the gap between per capita demand and supply of power for the last three years i.e. 2001-02, 2002-03 and 2003-04 have been worked out and are given in Annexure -III.

(b): The details of drawl of electrical energy from Central Sector Generating Stations during years 2001-02, 2002-03 and 2003-04 are given in Annexure-IV.

(c) & (d): The gap between demand and supply of electricity is likely to be mitigated gradually during next five years and likely to be completely bridged by the end of the 11th Plan in the year 2012. The steps taken to bridge the gap between per capita demand and supply of power inter-alia, include:

- A capacity addition of 41,110 MW has been targeted for 10th Five Year Plan in the country. Projects worth over 60,000 MW have been identified for being set up in XI Plan and advance action has already been started to ensure their commissioning in XI Plan.

- Early stabilization of newly commissioned units and overall increase in Plant Load Factor (PLF) of thermal units.

- Creation of a robust National Grid for optimum utilization of generation capacity and inter-regional transmission of power.

- To bring about reforms in electricity distribution, Government of India has implemented the Accelerated Power Development and Reforms Programme (APDRP) for up gradation of sub-transmission and distribution systems in States as a major step towards reduction of aggregate transmission and commercial losses and attaining commercial viability of the power sector.

- Demand side management, energy efficiency and conservation measures.

- Distribution of loans with interest subsidy by the Power Finance Corporation for renovation and modernization of old and inefficient generating units.

(e): The Annual Growth Rates of All India electrical energy generation is given below:

Year	Annual % increase
2001-02	3.2
2002-03	2.9
2003-04	6.1

(f) : No, Sir.

(g): Does not arise.

ANNEX-1A

ANNEX REFERRED TO IN PART (a) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO. 87 ANSWERED IN THE LOK SABHA ON 07.12.2004 REGARDING PER CAPITA DEMAND AND SUPPLY OF POWER.

Statewise details of Gaps between per capita electricity generation and electricity consumption for the year 2001-02.

Name of the State /U.T.s Per Capita Generation Per Capita Consumption Gap between per capita Gen. & Consumption

	kWh	kWh	kWh
Haryana	924.37	532.90	391.47
Himachal Pradesh	540.35	397.66	142.69
Jammu & Kashmir	604.33	292.82	311.51
Punjab	1253.27	835.69	417.58
Rajasthan	517.41	284.71	232.70
Uttar Pradesh	311.28	189.02	122.26
Uttaranchal	412.72	284.05	128.67
Chandigarh	1083.41	815.45	267.96
Delhi	1341.61	696.54	645.07
Sub Total (NR)	531.32	316.13	215.19
Gujarat	1094.23	817.18	277.05
Madhya Pradesh	495.48	273.04	222.44
Chhattisgarh	622.90	394.51	228.39
Maharashtra	851.24	507.90	343.34
Goa	1806.01	1067.89	738.13
Daman & Diu	7388.06	4622.88	2765.19
D. & N Haveli	3993.39	3722.13	271.26

Sub Total (WR)	804.03	513.45	290.58
Andhra Pradesh	699.74	494.13	205.61
Karnataka	638.03	427.76	210.27
Kerala	424.73	280.80	143.93
Tamil Nadu	782.12	623.25	158.87
Lakshadweep	331.00	290.50	40.50
Pondicherry	1676.61	1624.87	51.74
Sub Total (SR)	673.04	488.81	184.23
Bihar	81.50	36.29	45.21
Jharkhand	521.09	363.67	157.42
Orissa	550.02	324.55	225.47
West Bengal	351.10	218.10	133.00
A. & N. Islands	319.44	253.19	66.25
Sikkim	230.47	224.22	6.25
Sub Total (ER)	304.13	185.94	118.19
Assam	159.17	99.42	59.75
Manipur	198.28	69.43	128.85
Meghalaya	354.06	235.35	118.71
Nagaland	129.85	57.19	72.66
Tripura	208.72	108.75	99.97
Arunachal Pradesh	155.10	68.33	86.77
Mizoram	277.08	147.09	129.99
Sub Total (NER)	178.50	104.49	74.01

Total (All India) 559.18 360.97 198.21

Includes net import of 1285.83 MU

Annexure -I(B)

ANNEX REFERRED TO IN PART (a) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO. 87 ANSWERED IN THE LOK SABHA ON 07.12.2004 REGARDING PER CAPITA DEMAND AND SUPPLY OF POWER.

Statewise details of Gaps between per capita electricity generation and electricity consumption for the year 2002-03.

Name of the State /U.T.s	Per Capita Generation	Per Capita Consumption	Gap between per capita Gen. & Consumption
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kWh	kWh	kWh
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Haryana	997.08	580.04	417.04
Himachal Pradesh	598.71	420.37	178.34
Jammu & Kashmir	592.41	316.42	275.99
Punjab	1227.39	870.39	357.00
Rajasthan	566.14	290.91	275.23
Uttar Pradesh	316.13	187.73	128.40
Uttaranchal	463.70	311.68	152.02
Chandigarh	1126.98	858.82	268.16
Delhi	1426.17	739.00	687.17
Sub Total (NR)	551.83	326.35	225.48
Gujarat	1192.87	837.99	354.88
Madhya Pradesh	520.35	278.16	242.19
Chhattisgarh	675.86	515.80	160.06
Maharashtra	848.02	538.53	309.49
Goa	1842.70	1160.57	682.13
Daman & Diu	7375.94	4830.71	2545.23
D. & N Haveli	4135.15	4078.70	56.45
Sub Total (WR)	835.61	543.83	291.78
Andhra Pradesh	672.64	468.02	204.62
Karnataka	611.16	462.80	148.36
Kerala	377.54	284.53	93.01
Tamil Nadu	815.26	645.44	169.82
Lakshadweep	348.17	303.83	44.34
Pondicherry	1761.24	1605.17	156.07
Sub Total (SR)	660.32	494.80	165.52

Bihar	81.55	44.91	36.64
Jharkhand	467.70	310.01	157.69
Orissa	470.18	345.97	124.21
West Bengal	366.50	224.57	141.93
A. & N. Islands	375.14	292.54	82.60
Sikkim	246.88	130.84	116.04
Sub Total (ER)	290.45	188.22	102.23
Assam	159.97	105.53	54.44
Manipur	206.37	72.88	133.49
Meghalaya	335.86	300.84	35.02
Nagaland	139.11	61.42	77.69
Tripura	227.26	111.34	115.92
Arunachal Pradesh	132.45	70.72	61.73
Mizoram	299.85	162.25	137.60
Sub Total (NER)	180.29	113.72	66.57

Total (All India) 566.69 372.89 193.80

Includes net import of 1344.60 MU Annexure -I(C) ANNEX REFERRED TO IN PART (a) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO. 87 ANSWERED IN THE LOK SABHA ON 07.12.2004 REGARDING PER CAPITA DEMAND AND SUPPLY OF POWER.

Statewise details of Gaps between per capita electricity generation and electricity consumption for the year 2003-04.

Name of the State /U.T.s	Per Capita Generation kWh	Per Capita Consumption kWh	Gap between per capita Gen. & Consumption kWh
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Haryana	937.44	618.98	318.46
Himachal Pradesh	753.00	445.45	307.55
Jammu & Kashmir	647.46	327.04	320.42
Punjab	1300.64	902.76	397.88
Rajasthan	538.95	294.08	244.87
Uttar Pradesh	299.63	188.83	110.80
Uttaranchal	825.10	342.05	483.05
Chandigarh	1424.45	868.00	556.45
Delhi	1542.04	796.85	745.19
Sub Total (NR)	560.41	336.89	223.52
Gujarat	1175.23	917.96	257.27
Madhya Pradesh	474.78	283.54	191.24
Chhattisgarh	677.66	404.51	273.15
Maharashtra	878.57	559.35	319.22
Goa	2178.47	1067.35	1111.12
Daman & Diu	7037.98	5428.11	1609.87
D. & N Haveli	7496.78	6631.49	865.29
Sub Total (WR)	837.20	563.43	273.77
Andhra Pradesh	718.84	495.30	223.54
Karnataka	642.26	481.73	160.53
Kerala	386.20	291.11	95.09
Tamil Nadu	866.43	677.37	189.06
Lakshadweep	341.72	296.25	45.47
Pondicherry	1894.44	1828.55	65.89
Sub Total (SR)	699.34	519.27	180.07
Bihar	75.44	44.85	30.59
Jharkhand	564.26	394.87	169.39
Orissa	695.42	373.45	321.97
West Bengal	410.19	237.47	172.72
A. & N. Islands	420.29	301.89	118.40
Sikkim	765.68	323.69	441.99
Sub Total (ER)	351.94	207.41	144.53
Assam	160.08	105.34	54.74
Manipur	218.37	70.55	147.82
Meghalaya	416.02	332.37	83.65
Nagaland	155.91	65.47	90.44
Tripura	263.65	125.34	138.31
Arunachal Pradesh	224.64	110.33	114.31
Mizoram	300.76	140.28	160.48
Sub Total (NER)	192.33	117.27	75.06
Total (All India)	592.00	390.03	201.97

Include net import of 1690.02 MU

Annexure-II

ANNEX REFERRED TO IN PART (a) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO. 87 ANSWERED IN THE LOK SABHA ON 07.12.2004 REGARDING PER CAPITA DEMAND AND SUPPLY OF POWER.

Details of State-wise Per Capita Consumption/ Generation as per new definition.

Name of the State/ UTs Per Capita Consumption/ Generation (KWH)

2001-02 2002-03 2003-04

Chandigarh	1083.41	1126.98	1424.45
Delhi	1341.61	1426.17	1542.04
Haryana	924.37	997.08	937.44
H.P.	540.35	598.71	753.00
J & K.	604.33	592.41	647.46
Punjab	1253.27	1227.39	1300.64
Rajasthan	517.41	566.14	538.94
U.P.	311.28	316.13	299.63
Uttaranchal	412.72	463.70	825.10
Northern Region	531.32	551.83	560.41
Chhattisgarh	622.90	675.86	677.66
Gujarat	1094.23	1192.87	1175.23
M.P.	495.48	520.35	474.78
Maharashtra	851.24	848.02	878.57
Daman & Diu	7388.06	7375.94	7037.98
D.N. Haveli	3993.39	4135.15	7496.78
Goa	1806.01	1842.70	2178.47
Western Region	804.03	835.61	837.20
A.P.	699.74	672.64	718.84
Karnataka	638.03	611.16	642.26
Kerala	424.73	377.54	386.20
Tamilnadu	782.12	815.26	866.43
Pondicherry	1676.61	1761.24	1894.44
Lakshadweep	331.00	348.17	341.72
Southern Region	673.04	660.32	699.34
Bihar	81.50	81.55	75.44
Jharkhand	521.09	467.70	564.26
Orissa	550.02	470.18	695.42
W.Bengal	351.10	366.50	410.19
A & N Islands	319.44	375.14	420.29
Sikkim	230.47	246.87	765.68
Eastern Region	304.13	290.45	351.94
Ar.Pradesh	155.10	132.45	224.64
Assam	159.17	159.97	160.08
Manipur	198.28	206.37	218.37
Meghalaya	354.06	335.86a	416.02
Mizoram	277.08	299.85	300.76
Nagaland	129.85	139.11	155.91
Tripura	208.72	227.26	263.65
North-Eastern Region	178.50	180.29	192.33
All India	559.18	566.69	592.00

ANNEXURE - III

ANNEX REFERRED TO IN PART (a) OF THE STATEMENT IN REPLY TO STARRED QUESTION NO. 87 TO BE ANSWERED IN THE LOK SABHA ON 07.12.2004 REGARDING PER CAPITA DEMAND AND SUPPLY OF POWER. STATEWISE PER CAPITA GAP BETWEEN ELECTRICITY DEMAND & SUPPLY AT UTILITY GRID LEVEL FOR THE LAST THREE YEARS.

REGION 2001-02 2002-2003 2003-04

REGION 1999-2000 2000-2001 2001-02

STATE / Popu- Demand Supply Surplus Per Popu- Demand Supply Surplus Per Popu- Demand Supply Surplus Per
SYSTEM lation Deficit capita lation Deficit capita lation Deficit capita
(-)KWh deficit (-)KWh deficit (-)KWh deficit

Chandigarh 0.92 1110 1108 -2 -2.2 0.94 1146 1141 -5 -5.3 0.96 1088 1087 -1 -1.0
Delhi 14.07 19350 18741 -609 -43.3 14.49 19946 19567 -379 -26.2 14.94 20440 20160 -280 -18.7
Haryana 21.40 18138 17839 -299 -14.0 21.74 20298 19688 -610 -28.1 22.14 20743 19779 -964 -43.5
H.P. 6.13 3293 3206 -87 -14.2 6.20 3427 3341 -86 -13.9 6.26 3439 3424 -15 -2.4
J & K. 10.22 6635 5899 -736 -72.0 10.51 7243 6327 -916 -87.2 10.81 7105 6780 -325 -30.1
Punjab 24.55 28780 27577 -1203 -49.0 24.86 30082 28313 -1769 -71.2 25.20 31420 30520 -900 -35.7
Rajasthan 57.33 24745 24495 -250 -4.4 58.43 25917 25382 -535 -9.2 59.63 26611 26486 -125 -2.1
U.P. 176.86 48332 43545 -4787 -27.1 171.70 44777 36789 -7988 -46.5 175.27 46552 40399 -6153 -35.1
Uttaranchal 8.71 3774 3670 0 0.0 8.86 4197 4108 -89 -10.0
N.R. 311.48 150383 142410 -7973 -25.6 317.58 156610 144218 -12392 -39.0 324.07 161595 152743 -8852 -27.3
Chhattisgarh 20.93 8054 7825 -229 -10.9 21.41 9868 9561 -307 -14.3 21.83 10147 9876 -271 -12.4
Gujarat 51.66 53693 47530 -6163 -119.3 52.40 60175 53316 -6859 -130.9 52.85 57171 50292 -6879 -130.2
M.P. 61.10 31013 26233 -4780 -78.2 62.39 31705 26493 -5212 -83.5 63.69 32744 28417 -4327 -67.9
Maharashtra 97.78 80489 73438 -7051 -72.1 99.20 87152 75472 -11680 -117.7 100.67 87933 78966 -8967 -89.1
Daman & Diu (\$) 0.16 633 633 0 0.0
D.N. Haveli (\$) 0.24 1073 1073 0 0.0
Goa 1.36 1767 1767 0 0.0 1.40 1845 1845 0 0.0 1.44 1979 1979 0 0.0
W.R. 232.83 175016 156793 -18223 -78.3 236.80 190745 166687 -24058 -101.6 240.88 191680 171236 -20444 -84.9
A.P. 76.01 48394 44302 -4092 -53.8 77.15 47258 44049 -3209 -41.6 78.12 48080 46680 -1400 -17.9
Karnataka 53.19 32556 28493 -4063 -76.4 53.85 32249 29084 -3165 -58.8 54.54 36153 31145 -5008 -91.8
Kerala 31.97 13334 12349 -985 -30.8 32.36 13628 12693 -935 -28.9 32.71 12995 12498 -497 -15.2
Tamilnadu 63.40 46232 42951 -3281 -51.8 63.10 46262 43476 -2786 -44.2 63.75 45665 45042 -623 -9.8
Pondicherry 0.99 1228 1228 0 0.0 1.01 1479 1479 0 0.0
Lakshadweep 0.06 17 17 0 0.0 0.06 18 18 0 0.0 0.06 19 19 0 0.0
S.R. 224.63 140533 128112 -12421 -55.3 227.51 140643 130548 -10095 -44.4 230.19 144391 136863 -7528 -32.7
Bihar 111.48 13530 13148 -382 -3.4 85.58 8096 7422 -674 -7.9 87.16 7588 5878 -1710 -19.6
Jharkhand 27.66 5471 5410 0 0.0 28.11 7493 7294 -199 -7.1
Orissa 36.97 12328 12318 -10 -0.3 37.46 13393 13087 -306 -8.2 37.94 13610 13375 -235 -6.2
W.Bengal 80.78 24830 24731 -99 -1.2 81.99 24693 24341 -352 -4.3 83.12 26286 25740 -546 -6.6
A & N Islands N.A. 0.37 N.A. N.A. N.A. N.A. 0.38 N.A. N.A. N.A. NA
Sikkim 0.55 0.56 0.56
E.R. 230.14 50687 50197 -490 -2.1 233.62 51653 50260 -1393 -6.0 237.27 54977 52287 -2690 -11.3
Ar.Pradesh 1.10 136.3 134.6 -1.7 -1.5 1.12 162.4 161.4 -1 -0.9 1.13 177 175 -2 -1.8
Assam 26.85 3450.5 3425.2 -25.3 -0.9 27.37 3458 3349 -109 -4.0 27.85 3527 3321 -206 -7.4
Manipur 2.43 456.5 440.6 -15.9 -6.5 2.45 487.4 483.4 -4 -1.6 2.49 480 469 -11 -4.4
Meghalaya 2.34 700.1 705 4.9 2.1 2.37 949.2 947.2 -2 -0.8 2.40 1151 1076 -75 -31.3
Mizoram 0.90 284.5 278.5 -6.0 -6.7 0.91 294.7 292.7 -2 -2.2 0.93 283 276 -7 -7.5
Nagaland 2.05 260.1 258.4 -1.7 -0.8 2.06 290.1 289.1 -1 -0.5 2.08 306 300 -6 -2.9
Tripura 3.20 647.1 612.6 -34.5 -10.8 3.26 708.3 672.3 -36 -11.0 3.31 716 671 -45 -13.6
N.E.R. 38.87 5935.1 5854.9 -80.2 -2.1 39.54 6350.1 6195.1 -155 -3.9 40.19 6640 6288 -352 -8.8
All India 1037.95 522554 483367 -39187 -37.8 1055.05 546001.1 497908.1 -48093 -45.6 1072.60 559283 519417 -39866 -37.2

NOTE : - Information in respect of U.P. includes Uttranchal, Bihar includes Jharkhand and Tamilnadu includes Pondicherry during 2001-02. West Bengal includes Sikkim.

(\$) Figures of Daman Diu and D.N. Haveli for the year 2001-02 and 2002-03 are included in Gujarat & for the year 2003-04 (April to August`03) are also included in Gujarat.

() Population in million. MU = Million kWh.

ANNEXURE-IV

ANNEXURE REFERRED TO IN PART (b) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO. 87 TO BE ANSWERED IN THE LOK SABHA ON 07.12.2004 REGARDING PER CAPITA DEMAND AND SUPPLY OF POWER.

Details of Drawal from Central Sector Generating Stations for the years 2001-02 to 2003-04

(Figures in Million Units)

State / UT	2001-02	2002-03	2003-04
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Northern Region (NR)

Chandigarh	1054	1056	1363
Delhi	15517	15941	16844
Haryana	12076	11882	11526
H.P.	1888	2033	1855
J&K	4967	5785	5545
Punjab	10233	11099	12160
Rajasthan	13518	11515	12009
U.P.	21040	16005	19913
UPCL		3016	2209
Total (NR)	80293	78332	83424

Western Region (WR)

Chhattisgarh	858	2992	2884
Gujarat	12378	11773	11116
M.P.	12859	11051	10972
Maharashtra	15168	15957	16039
Goa	1219	1806	1828
Daman and Diu + Dadra & Nagar Haveli	2281	2484	2700

Total (WR)	44763	46063	45539
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Southern Region (SR)

Andhara Pradesh	9648	11836	14990
Karnataka	7149	8016	7757
Kerala	5211	6288	6061
Tamil Nadu	13309	14037	17242
Pondicherry	1268	1364	1469
Goa	578	653	734
Total (SR)	37163	42194	48253

Eastern Region (ER)

Bihar	11780	5640	5331
D.V.C.	1380	540	1111
Jharkhand	\$	5759	6175
Orissa	2990	5862	6588
West Bengal	5576	4002	7114
Sikkim	72	75	366

Total (ER)	21798	21878	26685
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Arunachal Pr.	113	140	155
Assam	1761	1597	2693
Manipur	436	480	466
Meghalaya	135	370	556
Mizoram	265	279	261
Nagaland	253	284	295
Tripura	312	340	162

Total (NER)	3275	3490	4588
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All India Total	187292	191957	208489
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Included in U.P.

\$ Included in Bihar.

Note: The figures given above include the power supplied from the dedicated, jointly owned and central sector generating stations.